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(54) Title: HETEROGENEOUS DISK STORAGE MANAGEMENT TECHNIQUE

HETROGENIOUS LOW-LEVEL DISK STORAGE MANAGEMENT TOOL SYSTEM STACK GRAPHICAL USER INTERFACE (GUI) / APPLICATION MANAGES INPUT AND PRESENTS A UNIFORM INTERFACE FO THE USER, ABSTRACTS THE UNDERLYING COMPLEXITY OF EACH DEVICE, MENU OPTIONS ARE TAILORED TO EACH UNIQUE STORAGE DEVICE. COM / DCOM LAYER 20-STORAGE DEVICE SPECIFIC CONFIGURATION RULES ARE DETERMINED AND ENFORCED. ONLY THE OPERATIONS THAT ADHERE TO THE DATABASE OF VENDOR SPECIFIC RULES ARE ALLOWED TO PROCEED, IF AN ILLEGAL COMMAND IS ATTEMPTED, AN ERROR MESSAGE IS RETURNED TO THE GUI AND THE USER IS NOTIFIED VIA HOST A POPUP WINDOW AND THE OPERATION IS CANCELED, DUE TO THE NATURE OF COM, IT IS SYSTEM POSSIBLE TO RUN REMOTELY (IE: YOU DO NOT NEED TO BE SITTING IN FRONT OF YOUR SYSTEM). <u>10</u> DATABASE DBS NecDULID.C, EmoDUL.C, CipricoDULID.C, etc... THIS LAYER TAKES ADVANTAGE OF EACH STORAGE SPECIFIC AFI, AND CONFORMS TO EACH ACCORDINGLY, ALL COMMANDS ARE ISSUED VIA STANDARD SCSI PASS-THROUGH COMMANDS. HOST BUS ADAPTER (HBA) HOST COMMANDS ARE CAPTURED AND FUNNELED BY THE HOST OPERATING SYSTEM THROUGH ITS OUN SCSI FC/SCSI INTERFACE AND EVENTUALLY TO ANY STANDARD FC/SCSI HOST BUS ADAPTER. FIBRE CHANNEL FABRIC **FABRIC** THIS LAYER IS PURELY OPTIONAL. THE ALTERNATIVE IS TO HAVE DIRECT ATTACHED STORAGE DEVICES. EXTERNAL FIBRE STORAGE **VENDOR A** VENDOR 6 VENDORC (CHANNEL **DEVICES**

(57) Abstract: Management of one or more storage devices (12₁-12) is achieved by first identifying each device by its make and model, and then establishing a database (18) containing information about that device, such as (a) operational rules, (b) commands and (c) processing routines. From the information obtained from the database (18), a Graphical User Interface is created for display to afford a user at least one menu option for selection. Upon selecting the one menu option, the user obtains at least one of (a) a display of information associated with the identified storage device, and (b) execution of at least one process to control, at least in part, the operation of the identified storage device. The user's selection is processed and the Graphical User Interface is automatically updated in response to the processing of the user's selected menu option.

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